REMARKS

Claims 1, 4-8 and 10-17 are currently pending, claims 4 and 10 have been withdrawn from consideration. Claims 14-17 have been allowed. Claim 3 is cancelled herein. Claims 1, 6, 8, and 12 are amended herein. No new matter has been added. Applicants respectfully request reconsideration of the above-identified application in light of the above amendments and the following remarks.

Claims 1 and 8 have been amended to recite *inter alia* an apparatus for levitating and transporting an object, including vibrators, transducers, and adjusters "wherein each first transducer is coupled to one end of the corresponding vibrator, wherein each vibration device further includes a second transducer, each of which is coupled to the other end of one of the vibrators, wherein each second transducer includes a piezoelectric element, which converts mechanical energy into electrical energy, wherein each of the first and second transducers includes an adjuster for adjusting the impedance of the vibration device, wherein the adjuster includes: a piezoelectric element, which converts mechanical energy into electrical energy; and an external impedance element, the impedance of which is variable". Support for these amendments is found throughout the Specification and Drawings, as filed, for example at paragraphs 28 – 31.

Claim Rejections under 35 U.S.C. §103

1. Claims 8 and 11-13 have been rejected under 35 U.S.C. as being unpatentable over JP 09-202425 in view of U.S. Patent No. 5,810,155 to Hashimoto ("Hashimoto"). Applicants respectfully traverse this rejection.

Neither JP 09-202425 nor Hashimoto disclose, teach, or suggest vibration devices, each of which has first and second transducers, wherein each first transducer includes a piezoelectric element, wherein each second transducer includes a piezoelectric element, wherein each of the first and second transducers includes an adjuster for adjusting the impedance of the vibration device having a piezoelectric element, which converts mechanical energy into electric energy, and an external impedance element, the impedance of which is variable, as recited in claim 8.

Regarding the primary reference, JP 09-202425, although each transducer 16 has one element to vibrate the corresponding vibrator 3, each transducer 16 does not have two elements to vibrate the corresponding vibrator 3. On the other hand, in the apparatus as recited in claim 8, the first transducer has two elements, that is, two piezoelectric elements, one of the piezoelectric elements which the adjuster includes. The second transducer also has two elements, that is, two piezoelectric elements, one of the piezoelectric elements which the adjuster includes. Furthermore, each of the first and second transducers has an adjuster for adjusting the impedance of the vibration devices. Therefore, the resonance frequencies of the vibration devices are easily equalized.

For at least the above reasons, independent claim 8 and claims 11-13, which depend from claim 8, define patentable subject matter over JP 09-202425 and Hashimoto, alone or in combination. Withdrawal of the rejection applied to claims 8 and 11-13 under 35 U.S.C. § 103(a) as being unpatentable over JP 09-202425 in view of Hashimoto is respectfully requested.

2. Claims 1 and 5-7 have been rejected under 35 U.S.C. §103(a) as being unpatentable JP 09-202425 in view of Hashimoto, further in view of U.S. Patent No. 4,284,403 to Rey ("Rey"). Applicants respectfully traverse this rejection.

Rey does not remedy the deficiencies of JP 09-202425 and Hashimoto in teaching or suggesting the subject matter of independent claim 1. Neither JP 09-202425 nor Hashimoto nor Rey disclose, teach, or suggest vibration devices, each of which has first and second transducers, wherein each first transducer includes a super-magnetostrictive material, wherein each second transducer includes a piezoelectric element, wherein each of the first and second transducers includes an adjuster for adjusting the impedance of the vibration device having a piezoelectric element, which converts mechanical energy into electric energy, and an external impedance element the impedance of which is variable, as recited in claim 1.

Similar to the arguments presented above regarding claim 8 and the primary reference, JP 09-202425, although each transducer 16 has one element to vibrate the corresponding vibrator 3, each transducer 16 does not have two elements to vibrate the corresponding vibrator 3. On the other hand, in the apparatus as recited in claim 1, the first transducer has two elements, that is, a super-magnetostrictive material and a piezoelectric element which an adjuster includes. The second transducer also has two elements, that is, two piezoelectric elements, one of the piezoelectric elements which the adjuster includes. Furthermore, each of the first and second transducers has an adjuster for adjusting the impedance of the vibration devices. Therefore, the resonance frequencies of the vibration devices are easily equalized.

For at least the above reasons, independent claim 1 and claims 5-7, which depend from claim 1, define patentable subject matter over JP 09-202425, Hashimoto, and Rey, alone or

in combination. Withdrawal of the rejection applied to claims 1 and claims 5-7 under 35 U.S.C. § 103(a) as being unpatentable over JP 09-202425 in view of Hashimoto, further in view of Rey, is respectfully requested.

CONCLUSION

For the foregoing reasons, Applicants believe that all claims, as currently presented are patentable, and that this application is in condition for allowance.

Respectfully submitted,
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